

REMARKS

The Office Action has been carefully considered. The present status of the application is as follows:

- Claims 1-8, 10, and 12-26 are pending in the application.
- Claims 1-8, 10, and 12-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brodner (U.S. Pat. No. 5,894,733) in view of Moore (U.S. Pat. No. 5,855,289).

In view of the following remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-8, 10, and 12-26.

1. Claims 1-8, 10, and 12-26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Brodner (U.S. Pat. No. 5,894,733) in view of Moore (U.S. Pat. No. 5,855,289). Applicants respectfully traverse this rejection.

Brodner is directed to a specimen vial 10 and labeled sleeve 12 that, in combination, purport to overcome difficulties apparently associated with labeling containers stored at cryogenic temperatures. Brodner, col. 1, ll. 9-10; 24-26; Figure 2. The vial 10 is cylindrically shaped and includes numerous ridges 34 disposed about the exterior surface 30. Col. 2, ll. 61-63; Figures 1, 2, and 4. (Brodner Figure 2 (left-hand drawing) seemingly misidentifies the ridges 34 by using reference designator 10.) The interior side 52 of the sidewalls 40 of the sleeve 12 also includes ridges 58. Col. 3, ll. 30-32; Figure 2. The vial 10 is inserted into sleeve 12, resulting in a "nested engagement," wherein the sleeve ridges 58 are in "pressing engagement" with the vial ridges 34. Col. 3, ll. 10; 46-48.

Brodner neither teaches nor discloses the geometry of the vial ridges 34. Brodner Figures 1, 2 (left-hand drawing), and 4 merely depict the ridges 34 as darkened lines, devoid of discernable surface features. Nevertheless, the effect of the ridges 34 is to increase the diameter of the vial 10 about the circumference where the ridges 34 are located, relative to the remainder of the vial 10. The pressing engagement described in Brodner results when, for example, the sleeve 12 "telescopically" receives the vial 10. Col. 3, ll. 4-5. As the vial 10 is inserted into the sleeve 12, the locally increased diameter provided by the ridges 34 causes the vial 10 to become

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wedged in the sleeve 12 when the ridges 34 come into contact with the ridges 58 on the interior side 52 of the sidewall 40 of the sleeve 12. In other words, this configuration creates a sliding interference fit between the vial 10 and sleeve 12. The term "sliding" refers to the longitudinal translation of the vial 10 as it is inserted into the sleeve 12.

Brodner ridges 56 operate similarly in relation to the tray 16. Specifically, the sleeve 12, with the vial 10 nested therein, is placed in the aperture 62 of the tray 16, the aperture opening 66 having ridges 68 that are in "pressing engagement" with the ridges 56 on the outer surface 55 of the sleeve 12. Col. 3, ll. 28-30; 34-36. A sliding interference fit between the sleeve 12 and the tray 16 results from this configuration. In this instance, the term "sliding" refers to the longitudinal translation of the sleeve 12 as it is inserted into the tray 16.

Moore teaches the use of ribs 64, 70 on a lid 34 that are adapted to flex under a centrifugal load and expand the peripheral member 38 of the lid 34. Col. 5, ll. 34-36. This expansion increases the sealing force applied by the lid 34, tightening the seal between the gasket 54 and the cylindrical wall 26. Col. 6, ll. 43-47. The downward deflection of the ribs 64, 70 also focuses the compressive force applied by the lid 34 away from the center of the stopper 84 onto the area of the stopper 84 that coincides with the annular ring 68. Col. 7, ll. 18-20. This enhances the fluid-tight and air-tight seal between the stopper 84 and the receptacle 22. Col. 6, ll. 29-35. The mating surfaces of the stopper 84 and the receptacle 22 are smooth, thereby ensuring an effective seal. Moore Figure 7. Thus, the ribs 64, 70 purportedly serve to increase the effectiveness of the two seals when the container 10 is in use. Because the amount of deflection and corresponding expansion increase in proportion to the centrifugal force, the seals are improved as the force increases. Lastly, as stated in earlier Office Actions, Moore does not teach the use of at least one anti-rotation lug. *See, e.g.*, Office Action mailed 7-Feb-02, p. 5; Office Action mailed 14-Aug-01, p. 4.

As an initial matter, Applicants believe that Brodner (filed 7-Jan-98) is not prior art to Applicants' invention. Applicants are further investigating this issue and reserve the right to file a suitable declaration under 37 C.F.R. § 1.131 to swear behind Brodner, if necessary. In the interim, Applicants submit that the combination of Brodner and Moore does not render

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Applicants' invention obvious to one of ordinary skill in the art because the combination does not result in Applicants' claimed invention.

Applicants claim a sample vial for use in an automated test apparatus that includes:

- (i) an anti-rotation lug comprising a generally flat, longitudinally disposed surface extending radially outwardly from said body outer surface, the longitudinally disposed surface comprising a lowermost edge that is substantially perpendicular to said body outer surface; whereby
- (ii) both of the flat surface and the lowermost edge react against proximate structure of the automated test apparatus when installed therein to facilitate at least one of automated removal and installation of the cap.

Applicants' anti-rotation lugs 18 have a geometry that provides control over the rotation and penetration depth (i.e., translation) of the body 12 relative to the bore 52 and vial sleeve 64. When inserted into the bore 52, the anti-rotation lugs 18 mate with a unidirectional interface 54 longitudinally and circumferentially. The radially extending longitudinally disposed surface of each anti-rotation lug 18 reacts against respective ramp faces 58 of the unidirectional interface 54. The substantially perpendicular lowermost edges of the anti-rotation lugs 18 react against the ramps 56 to constrain the depth to which the body 12 is received into the tray 16. Similarly, when the body 12 is inserted in the vial sleeve 64, each anti-rotation lug 18 is received in an axially extending slot 66 having a circumferentially disposed portion 74 that is used to lock each anti-rotation lug 18 to prevent axial translation of the vial 10. Specification, p. 13, l. 13 – p. 14,

1. 4.

In each of these instances, Applicants' anti-rotation lugs 18 react against proximate structure of the automated test apparatus both longitudinally and circumferentially to provide a definitive stop to the motion (rotation and translation) of the body 12 relative to the bore 52 and vial sleeve 64. This facilitates automated removal and installation of the cap 14. In contrast, the sliding interference fit afforded by the Brodner ridges does not permit control over the depth to which the Brodner vial 10 is received into its sleeve 12. The depth is related to the amount of force applied during insertion. Further, Brodner neither teaches nor discloses features of the

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ridges that constrain rotational motion of the vial 10. Consequently, rotation of the Brodner vial 10 in its sleeve 12 is related to the amount of torque applied. A sufficient torque applied to the vial 10 would overcome the resistance created by the sliding interference fit between, for example, the vial 10 and the sleeve 12. Once this resistance is overcome, the vial 10 would rotate readily.

In view of the above, and because Moore fails to teach the use of at least one anti-rotation lug, Applicants respectfully submit that the combination of Brodner and Moore fails to render Applicants' claimed invention obvious to one of ordinary skill in the art.

Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1-8, 10, and 12-26 under 35 U.S.C. § 103(a) as being unpatentable over Brodner in view of Moore.

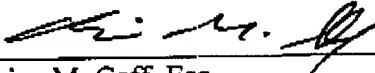
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CONCLUSION

In view of the foregoing, Applicants submit that claims 1-8, 10, and 12-26, are clearly and patentably distinguished over the cited references, either alone or in proper combination, and are therefore allowable. Applicants respectfully request entry of this Response, reconsideration, and early favorable action by the Examiner.

The Examiner is cordially invited to contact Applicants' undersigned representative at the number listed below to discuss any outstanding issues.

Respectfully submitted,



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